

CLAIMS

1. A method in a computer system for customized design and manufacture of an anatomically correct implant customized for a patient, comprising:

producing a radiological image of an anatomical body part or bone that is to be replaced, repaired or augmented;

converting the radiological image into a format transmittable over a computer system;

creating a computer based multi-dimensional model based on the converted patient specific radiological image;

modifying the multi-dimensional model using the computer system; and

manufacturing an implant according to the modified model using three-dimensional printing techniques.

2. The method of claim 1, further comprising compositional design within the multi-dimensional model that are translated into the manufactured implant.

3. The method of claim 1, further comprising transmitting the multi-dimensional model to a client for approval prior to manufacturing the biomedical implant.

4. The method of claim 1, further comprising growth factors, comb polymers, or other substances having biological activity.

5. The method of claim 1, further comprising markers for future radiological viewing.

6. A method for manufacturing and selling individually fitted customized biomedical devices for a given recipient via a computer network, comprising:

capturing data in a computerized form;

converting the data to a multi-dimensional model;
modifying the multi-dimensional model to include an internal architecture;
converting the modified multi-dimensional model into machine instructions;
manufacturing a customized biomedical device from the machine instructions
wherein the biomedical device is anatomically correct to the individual patient; and
shipping the biomedical device to the recipient for implantation.

7. The method of claim 6, further comprising transmitting the modified multi-dimensional model to the recipient for further modification prior to converting the model into machine instructions.

8. A method for manufacturing and selling customized medical devices via a computer network, comprising:

transmitting patient-specific data from a patient location to a secure web site via a computer network;
manufacturing the medical device based on the transmitted data;
delivery of the medical device; and
maintaining records of the patient-specific data.

9. The method of claim 8, further comprising generating follow-up notices based on the maintained records.

10. The method of claim 8 wherein the medical device is an oral dosage form containing one or more active pharmaceutical ingredients.

11. The method of claim 8 wherein the medical device is an implantable drug delivery device containing one or more active pharmaceutical ingredients.

12. The method of claim 8 wherein the medical device is manufactured by three dimensional printing.

13. The method of claim 8 wherein manufacturing the medical device further includes selecting the best fit implant from a group of already-manufactured implants.

14. An Internet-enabled method for designing and manufacturing biomedical devices comprising: using an Internet-enabled system to transmit radiological images to a central server;

converting the radiological images into a digital format;

transmitting the digital format of the radiological images to the central server operably connected to a manufacturing station; and

manufacturing the biomedical device in accordance with the radiological image.

15. The method of claim 15, further comprising creating a multidimensional model from the digital format of the image and transmitting the model to a client for modification.

16. The method of claim 15 wherein manufacturing the biomedical device in accordance with the radiological image includes selecting a best fit from a plurality of already manufactured medical devices.